

JUL 18 2002

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

PTO/SB/08 (08-00)

Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Substitute for form 1449B/PTO
**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

Date Submitted: July 18, 2002

(use as many sheets as necessary)

Sheet 1 of 4

Complete if Known

Application Number	09/897,425
Filing Date	07/03/2001
First Named Inventor	Maude M. MOLONEY et al.
Group Art Unit	1638
Examiner Name	Unassigned FOX

Attorney Docket Number 034547-0106

U.S. PATENT DOCUMENTS

Class / Sub

Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
DJF	A1	5,650,554		MOLONEY	07/22/1997	800 / 205

FOREIGN PATENT DOCUMENTS

Class / Sub 1 Transl

Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Office ³	Number ⁴	Kind Code ⁵ (if known)			
DJF	A2	WO	93/07278		CIBA-GEIGY AG	04/15/1993	— —
	A3	WO	97/02352		CIBA-GEIGY AG	01/23/1997	— —
	A4	WO	00/36126		NOVARTIS AG	06/22/2000	— —
	A5	WO	00/58352		THE REGENTS OF THE UNIVERSITY OF CALIFORNIA	10/05/2000	— —
	A6	EP	0 193 259		PLANT GENETIC SYSTEMS N.V.	09/03/1986	— —

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
DJF	A7	RADKE, et al., "Transformation of <i>Brassica napus</i> L. using <i>Agrobacterium tumefaciens</i> : Developmentally Regulated Expression of a Reintroduced Napin Gene", Theor. Appln. Genet., Springer-Verlag, Vol. 75, pp. 685-694, (1988)	
	A8	TAYLOR, et al., "Storage-protein Regulation and Lipid Accumulation in Microspore embryos of <i>Brassica napus</i> L.", Planta, Springer-Verlag, Vol. 181, pp. 18-26, (1990)	
	A9	SIJMANS, et al., "Production of Correctly Processed Human Serum Albumin in Transgenic Plants", Bio/Technology, Vol. 8, pp. 217-221, (1990)	
	A10	HUANG, "Lipid Bodies", Modern Methods Plant Analysis, Vol. 1, pp. 145-151, (1985)	
	A11	MISRA, et al., "Heavy Metal Tolerant Transgenic <i>Brassica napus</i> L. and <i>Nicotiana tabacum</i> L. Plants", Theor. Appl. Genet., Springer-Verlag, Vol. 78, pp. 161-168, (1989)	

Examiner Signature

David J. Ulrich

Date Considered

1/15/03

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

JUL 18 2002 Date Submitted: July 18, 2002

(use as many sheets as necessary)

Sheet 1 of 2

Complete if Known

Application Number	09/897,425
Filing Date	07/03/2001
First Named Inventor	Maurice M. MOLONEY et al.
Group Art Unit	1638
Examiner Name	Unassigned FOX
Attorney Docket Number	034547-0106

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
DJF	A12	HATZOPoulos, et al., "Interaction of Nuclear Factors with Upstream Sequences of Lipid Body Membrane Protein Gene from Carrot", The Plant Cell, American Society of Plant Physiologists, Vol. 2, pp. 457-467, (1990)	
	A13	LEE, et al., "Maize Oleosin is Correctly Targeted to Seed Oil Bodies in <i>Brassica napus</i> Transformed with the Maize Oleosin Gene", Biology, Proc. Natl. Acad. Sci. USA, Vol. 88, pp. 6181-6185, (1991)	
	A14	VANCE, et al., "Expression of Lipid Body Protein Gene during Maize Seed Development", The Journal of Biological Chemistry, The American Society for Biochemistry and Molecular Biology, Inc., Vol. 263, No. 3, pp. 1476-1481, (1988)	
	A15	VANCE, et al., "The Major Protein from Lipid Bodies of Maize", The Journal of Biological Chemistry, The American Society for Biochemistry and Molecular Biology, Inc., Vol. 262, pp. 11275-11279, (1987)	
	A16	QU, et al., "Oleosin KD 18 on the Surface of Oil Bodies in Maize", The Journal of Biological Chemistry, The American Society for Biochemistry and Molecular Biology, Inc., Vol. 265, No. 4, pp. 2238-2243, (1990)	
	A17	SENGUPTA-GOPALAN, et al., "Developmentally Regulated Expression of the Bean β -Phaseolin Gene in Tobacco Seed", Developmental Biology, Proc. Natl. Acad. Sci. USA, Vol. 82, pp. 3320-3324, (1985)	
DJF	A18	FRALEY, et al., "Expression of Bacterial Genes in Plant Cells", Genetics, Proc. Natl. Acad. Sci. USA, Vol. 80, pp. 4803-4807, (1983)	
DJF	A19	VANDERKERCKHOVE, et al., "Enkephalins Produced in transgenic Plants using Modified 2S Seed Storage Proteins", Bio/Technology, Vol. 7, pp. 929-932, (1989)	
DJF	A20	MURPHY, et al., "Synthesis of the Major Oil-body Membrane Protein in Developing Rapeseed (<i>Brassica napus</i>) Embryos", Biochem. J., Vol. 258, pp. 285-293, (1989)	
DJF	A21	QU, et al., "Characteristics and Biosynthesis of Membrane Proteins of Lipid Bodies in the Scutella of Maize (<i>Zea mays L.</i>)", Biochem. J., Vol. 235, pp. 57-65, (1986)	
	A22	JOSEFSSON, et al. "Structure of a Gene Encoding the 1.7 S Storage Protein Napin, from <i>Brassica napus</i> ", The Journal of Biological Chemistry, Vol. 262, No. 25, pp. 12196-12201, (1987)	
	A23	SCOFIELD, et al., "Nucleotide Sequence of A Member of the Napin Storage Protein Family From <i>Brassica napus</i> ", Journal of Biological Chemistry, The American Society for Biochemistry and Molecular Biology, Inc., Vol. 262, No. 25, pp. 12202-12208, (1987)	
	A24	FUJIKAWA, et al., "Bovine Factor X1 (Stuart Factor), Mechanism of Activation by a Protein from Russell's Viper Venom", Biochemistry, Vol. 11, pp. 4892-4899, (1972)	
✓	A25	NAGAI, et al., "Oxygen Binding Properties of Human Mutant Hemoglobins Synthesized in <i>Escherichia coli</i> ", Biochemistry, Proc. Natl. Acad. Sci. USA, Vol. 82, pp. 7252-7255, (1985)	

Examiner Signature

Date Considered

11/5/03

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

JUL 18 2002 Date Submitted: July 18, 2002

(use as many sheets as necessary)

Sheet 3 of 4

Complete if Known

Application Number	09/897,425
Filing Date	07/03/2001
First Named Inventor	Maurice M. MOLONEY et al.
Group Art Unit	1638
Examiner Name	Unassigned Fox

Attorney Docket Number 034547-0106

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
DY	A26	SCHOLTISSEK, et al., "A Plasmid Vector System for the Expression of a Triprotein Consisting of Betagalactosidase, a Collagenase Recognition Site and a Foreign Gene Product", Gene, Elsevier, Vol. 62 pp. 55-64, (1988)	
	A27	BEVAN, "Binary Agrobacterium Vectors for Plant Transformation", Nucleic Acids Research, IRL Press Limited, Vol. 12, No. 22, pp. 8711-8721, (1984)	
	A28	MURPHY, et al., "A class of Amphipathic Proteins Associated with Lipid Storage Bodies in Plants", Biochem. Biophys. Acta, Elsevier Science Publishers, Vol. 1088, pp. 86-94, (1991)	
	A29	ANTONI, et al., "A Short Synthetic Peptide Fragment of Human Interleukin 1 with Immunostimulatory But not Inflammatory Activity", The Journal of Immunology, The American Association of Immunologists, Vol. 137, pp. 3201-3204, (1986)	
	A30	AN, et al., "New Cloning Vehicles for Transformation of Higher Plants", Embo J., IRL Press Limited, Vol. 4, pp. 277-284, (1985)	
	A31	HOOD, et al., "The Hypervirulence of Agrobacterium tumefaciens A281 is encoded in a Region of pTiBo542 outside of T-DNA", Journal of Bacteriology, American Society for Microbiology, Vol. 168, No. 1, pp. 1291-1301, (1986)	
	A32	HOLBROOK, et al., "Oilbody Proteins in Microspore-Derived Embryos of Brassica napus", Plant Physiol. Vol. 97, pp. 1051-1058, (1991)	
	A33	KALINSKI, et al., "Molecular Cloning of a Protein Associated with Soybean Seed Oil Bodies that is Similar to Thiol Proteases of the Papain Family", The Journal of Biological Chemistry, Vol. 265, pp. 13843-13848, (1990)	
	A34	BOSCH, et al., "A Trout Growth Hormone is Expressed, Correctly Folded and Partially Glycosylated in the Leaves but not the Seeds of Transgenic Plants", Transgenic Research, Chapman & Hall, Vol. 3, pp. 304-310, (1994)	
	A35	KOREN, et al., "Carp Growth Hormone: Molecular Cloning and Sequencing of cDNA", Cell, Vol. 77, pp. 309-315, (1989)	
	A36	BOWER, et al., "Two members of the Thioredoxin-h Family Interact with the Kinase Domain of a Brassica S Locus Receptor Kinase", Plant Cell, American Society of Plant Physiologist, Vol. 8, pp. 1641-1650, (1996)	
	A37	CARUGO, et al., "NADP-Dependent Enzymes. I: Conserved Stereochemistry of Cofactor Binding", Proteins, Wiley-Liss, Inc., Vol. 28, pp. 10-28, (1997)	
	A38	DEL VAL, et al., "Thioredoxin Treatment Increases Digestibility and Lowers Allergenicity of Milk", J. Allerg. Clin. Immunol., Vol. 103, pp. 690-697, (1999)	
✓	A39	GALKIN, et al., "Construction of a New Leucine Dehydrogenase with Preferred Specificity for NADP ⁺ by Site-Directed Mutagenesis of the Strictly NAD+-Specific Enzyme", Protein Engineering, Oxford University Press, Vol. 10, pp. 687-690, (1997)	

Examiner Signature

Adrian J. H.

Date Considered

1/5/03

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

JUL 18 2002

Substitute for form 1449B PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Date Submitted: July 18, 2002

(use as many sheets as necessary)

Sheet 4 of 4

Complete if Known

Application Number	09/897,425
Filing Date	07/03/2001
First Named Inventor	Maurice M. MOLONEY et al.
Group Art Unit	1638
Examiner Name	Unassigned Fox
Attorney Docket Number	034547-0106

RECEIVED
TECH CENTER 1600
JUL 19 2002
1600/2001

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
DJF	A40	GAUTIER, et al., "Characterization of Wheat Thioredoxin h cDNA and Production of an Active <i>Triticum Aestivum</i> Protein in <i>Escherichia coli</i> ", Eur. J. Biochem., FEBS, Vol., 252, pp. 314-324, (1998)	
	A41	HÖÖG, et al., "Nucleotide Sequence of the Thioredoxin Gene from <i>Escherichia coli</i> ", Bioscience Reports, Vol. 4, pp. 917-923, (1984)	
	A42	HOLMBERG, et al., "Redesign of the Coenzyme Specificity in L-Lactate Dehydrogenase from <i>Bacillus stearothermophilus</i> Using Site-Directed Mutagenesis and Media Engineering", Protein Engineering, Oxford University Press, Vol. 12, pp. 851-856, (1999)	
	A43	HURLEY, et al., "Determinants of Cofactor Specificity in Isocitrate Dehydrogenase: Structure of an Engineered NADP+ - NAD+ Specificity-Reversal Mutant", Biochemistry, Vol. 35, pp. 5670-5678, (1996)	
	A44	ISHIWATARI, et al., "Thioredoxin h is one of the Major Proteins in Rice Phloem sap", Planta, Vol. 195, pp. 456-463, (1995)	
	A45	JOHNSON, et al., "Thioredoxin System of the Photosynthetic Anaerobe <i>Chromatium vinosum</i> ", Journal of Bacteriology, American Society for Microbiology, Vol. 158, No. 3, pp. 1061-1069, (1984)	
	A46	LUTHMAN, et al., "Rat Liver Thioredoxin and Thioredoxin Reductase: Purification and Characterization", Biochemistry, Vol. 21, No 26, pp. 6628-6633, (1982)	
	A47	MARTY, et al., "Nucleotide Sequence of a cDNA Encoding a Tobacco Thioredoxin", Plant Mol. Biol., Vol. 17, pp. 143-148, (1991)	
	A48	RIVERA-MADRID, "Evidence for Five Divergent Thioredoxin h Sequences in <i>Arabidopsis thaliana</i> ", Proc. Natl. Acad. Sci., Vol. 92, pp. 5620-5624, (1995)	
	A49	RUSSEL, et al., "Sequence of Thioredoxin Reductase from <i>Escherichia coli</i> ", J. Bio. Chem., Vol. 263, pp. 9015-9019, (1988)	
	A50	SHI, et al., "A Novel Plasma Membrane-Bound Thioredoxin From Soybean", Plant Mol. Biol., Vol. 32, pp. 653-662, (1996)	
	A51	SHIRAIKI, et al., "Engineering of Pyridine Nucleotide Specificity of Nitrate Reductase: Mutagenesis of Recombinant Cytochrome b Reductase Fragment of <i>Neurospora crassa</i> NADPH: Nitrate Reductase", Archives of Biochemistry and Biophysics, Academic Press, Vol. 358, No. 1, pp. 104-115, (1998)	
	A52	TERASHIMA, et al., "Short Communication cDNA Sequence of Bovine Thioredoxin", DNA Seq., Vol. 10, No. 3, pp. 203-205, (1999)	

Examiner Signature

David J. F.

Date Considered

11/5/03

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.